

**Submarine Maintenance Engineering, Planning and Procurement.**

# **SUBMEPP: Mission Capable. Service Proven.**



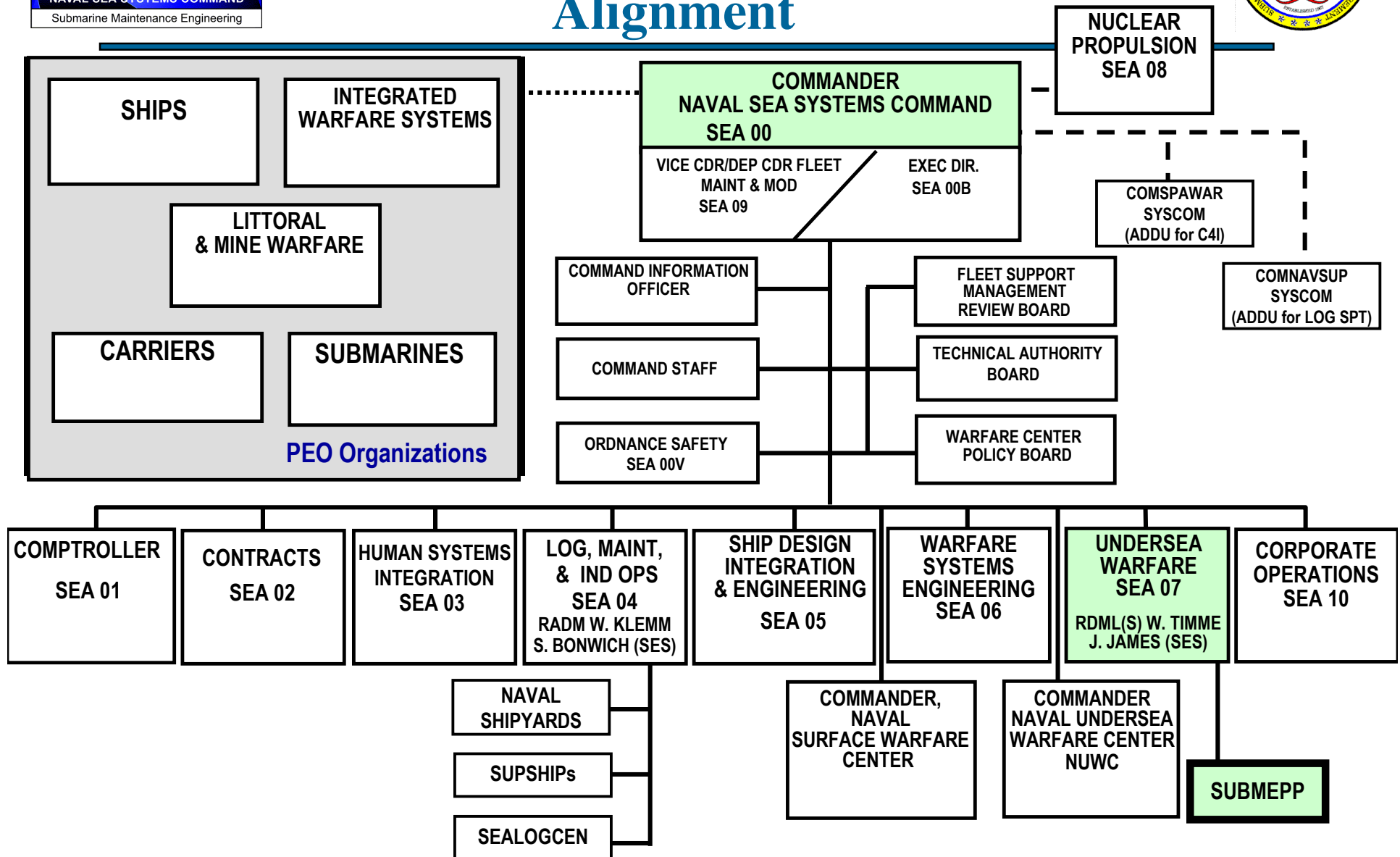
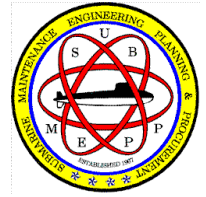
**SUBMEPP SUBSAFE OVERVIEW**

**Presented to:**

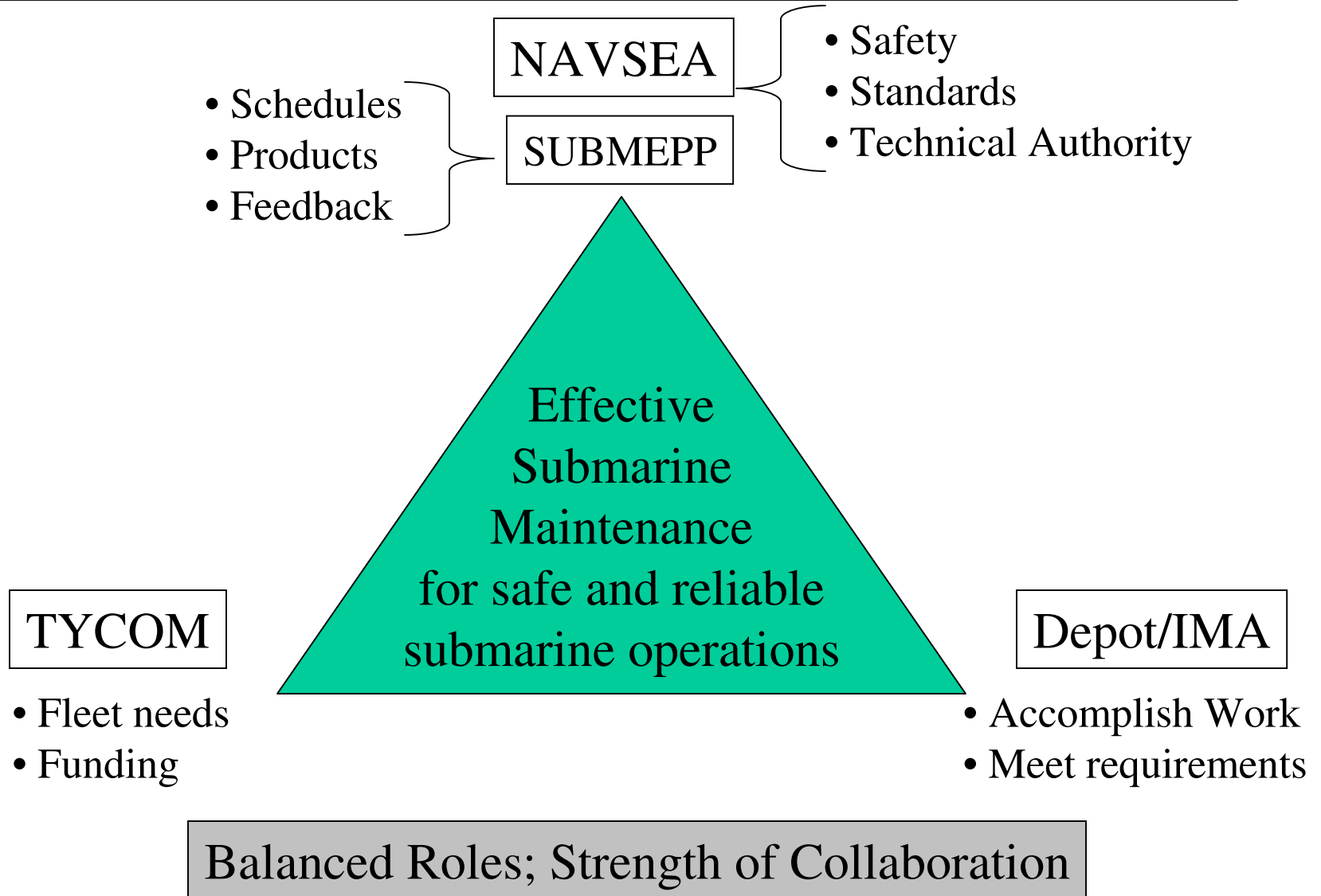
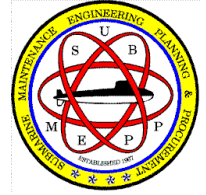
**NASA – 15 September 2004**



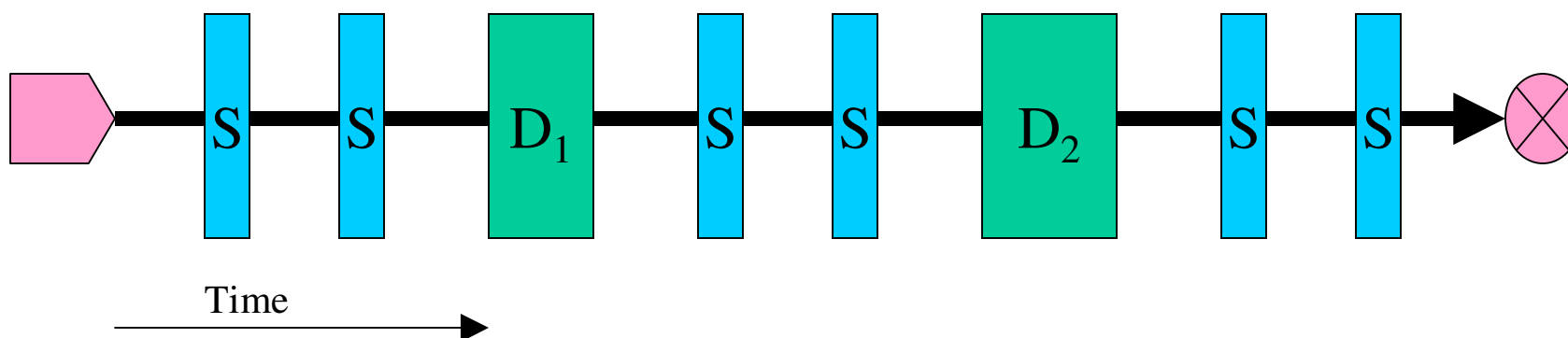
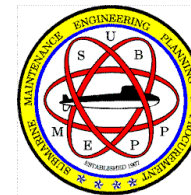
# Command Organizational Alignment



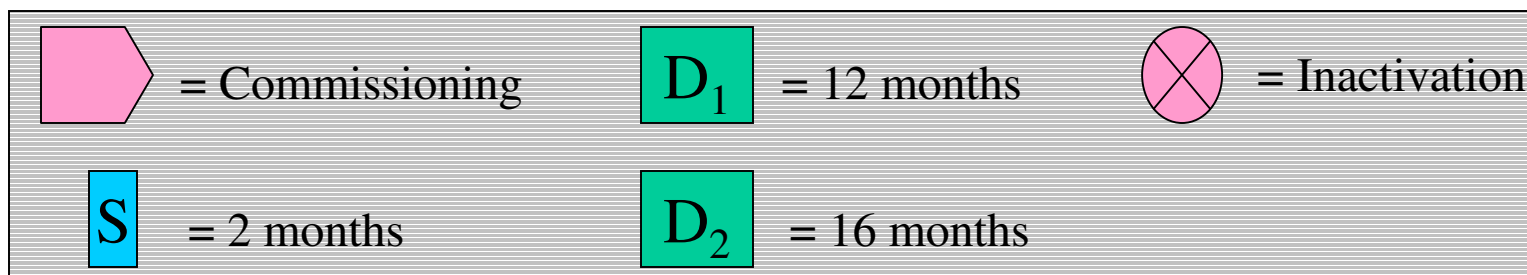
# Key Players



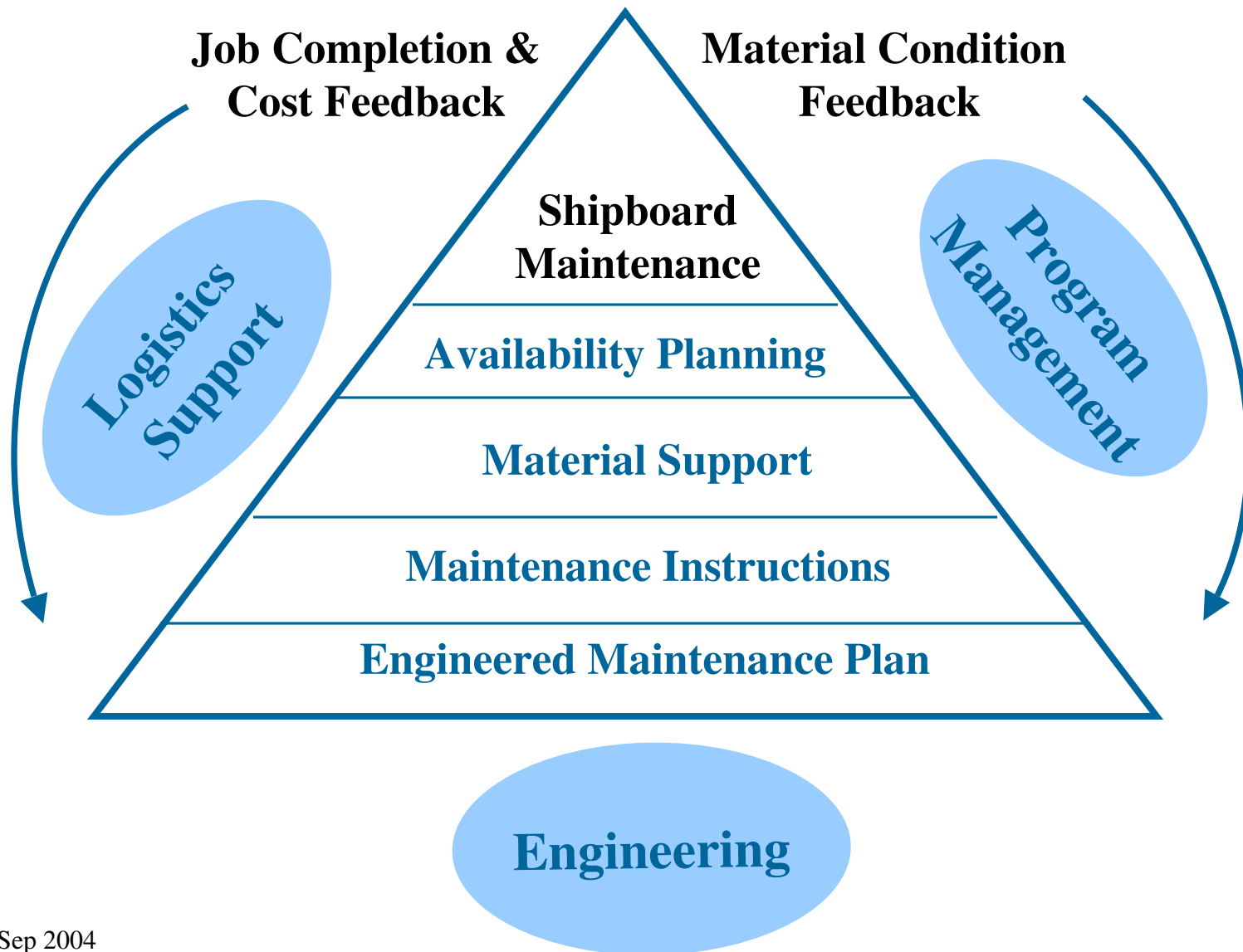
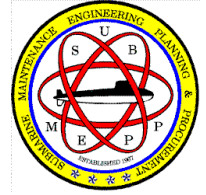
# Submarine Life-Cycle Maintenance Periods



## Legend

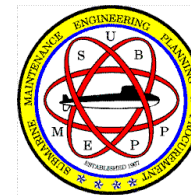


# Submarine Maintenance Engineering Products to the Fleet





# Engineered Maintenance Planning



## INPUTS

### Engineer Maintenance Plans

(~ 28,000 maintenance requirements for Safe & Reliable Operation of 87 platforms)

← Configuration Data

← Material Condition, Cost & Job Completion Data



## OUTPUTS

**Engineered Maintenance Plans**  
(all Submarines)

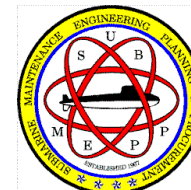
**What to do:** Inspections, Surveys, Tests, Restorations, Replacements, Repairs, etc.

**When to do it:** Time Based, Material Condition Based, Performance Based or Situation Based

**Who to do it:** Depot, Intermediate or Ships Force



# Maintenance Instruction Documents Process



**Specify Minimum Technical Work Requirements**

- Used 22,000 times/year during I & D Level Availabilities

## INPUTS

- ← Engineered Maintenance Plan Requirements
- ← Configuration Data
- ← Higher Level Technical Documents
- ← Customer Feedback

## OUTPUTS

**Maintenance Standards**

- 4000 Documents

**Standardized Test Procedures**

- 2300 Documents

**Unrestricted Operation to Design Test Depth (URO) MRCs**

- 7 Volumes

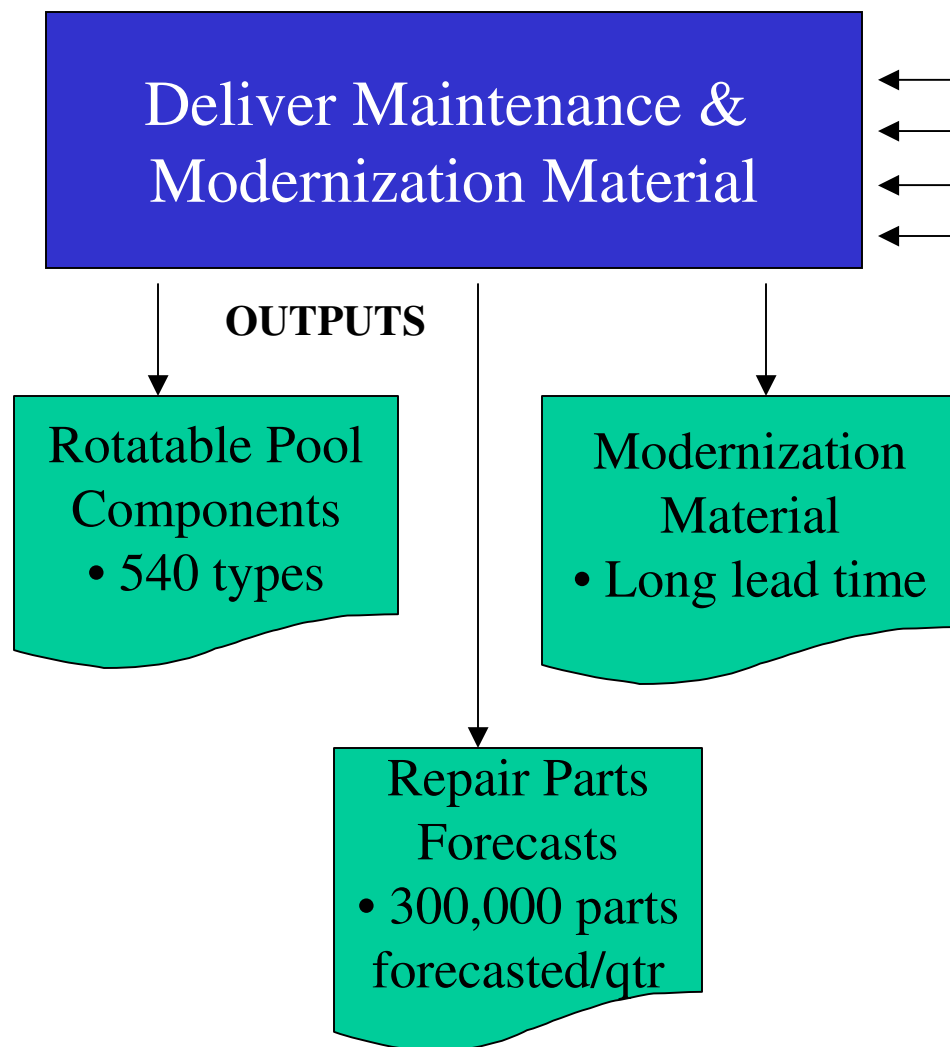
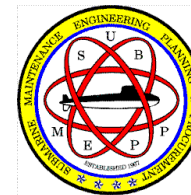
**Joint Fleet Maintenance Manual (JFMM)**

- 5 Volumes

## “Hammer” Award Recipients



# Material Support Process



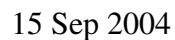
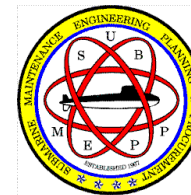
## INPUTS

- ← Depot Availability Schedules
- ← Engineered Maintenance Plan Requirements
- ← Configuration Data
- ← Maintenance Standard Material Lists

## New Hampshire Federal Executive Association Award Recipients

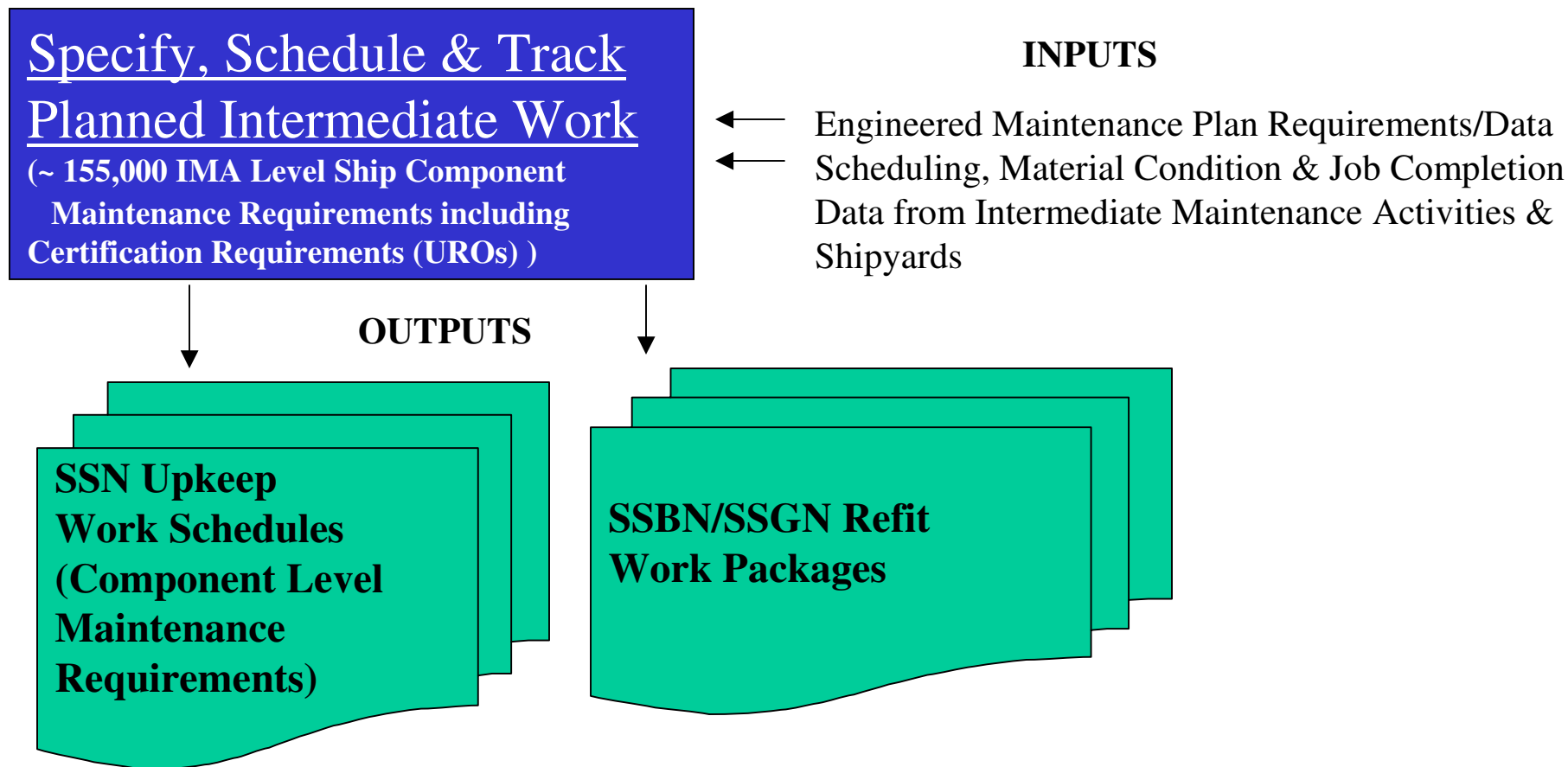
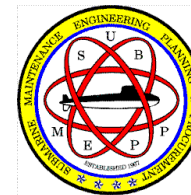






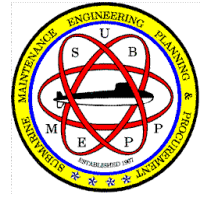


# Availability Planning Process (Intermediate Level)





# SUBMEPP's SUBSAFE Responsibilities

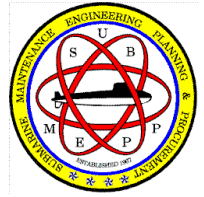


- Develop and maintain planned maintenance requirements for SUBSAFE Components
- Ensure planned maintenance is accurately reflected in all SUBMEPP products
- Maintain all URO (certification) requirements current, and provide technical review of completed inspection reports
- Ensure all material procurements for SUBSAFE components meet program requirements
- Actively participate and support NAVSEA SUBSAFE efforts, audits and initiatives



# Maintaining Organizational Compliance

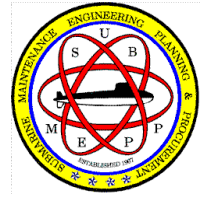
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- SUBSAFE Director
- Documented Processes
- Internal Audit Program
- Bi-Annual Functional Audit
- Training (process-specific and SUBSAFE)
- Qualified SUBSAFE Auditors
- Participation in external SUBSAFE Audits
- SUBSAFE Improvement Committee



# SUBSAFE Program Benefits

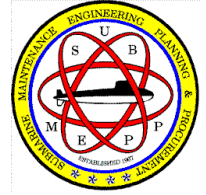


- SUBSAFE Director
  - Independent oversight
  - Reports to Chief Engineer (and NAVSEA)
  - Member of NAVSEA SUBSAFE Working Group
- “Tough” look through bi-annual Audit
- High expectations, clear requirements, 100% compliance
- Participation in external Audits
  - Knowledgeable of success/problems/trends at other activities
  - Gain specific insights from users of SUBMEPP’s products and services





# Practical Example

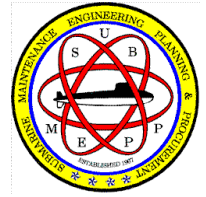


- SUBMEPP
  - Reputation for technical excellence
  - Fared well in past SUBSAFE Audits
  - Didn't do well in last Audit (Aug 04)
  - Found to not be in compliance with SUBSAFE in some areas
  - Contributing factors include culture of “can do” and “environment of churn”
- Expectation (of ourselves and SUBSAFE Community)
  - Understand the issues
  - No excuses, no rationalization
  - Fix the problems and comply (actions already underway)



# Practical Observations

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- SUBSAFE – the program, specific requirements, verbatim compliance – it's what makes our business different from the rest of the Navy
- SUBMEPP received intense review in latest audit; result is specific action to reverse negative trends
- The community holds each other accountable for maintaining compliance